

U.S. Appl. No. 10/808,947
Reply to Office Action dated April 25, 2007

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PATENT
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IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A diagnosing device for a stereo camera mounted on a robot, said device comprising:
 - a flat surface portion on which texture for stereo camera diagnosis is provided;
 - an attitude unit that causes said robot apparatus placed on said diagnostic mat to assume a stance suitable for obtaining an image of the diagnostic mat;
 - a creation unit adapted to create a distance image based on the image obtained by said stereo camera;
 - an image detection unit adapted to detect the flat face of said diagnostic mat from said created distance image; and
 - a measurement unit adapted to measure the flatness of said detected flat face, and verifying the performance of a stereo camera according to whether or not the flatness is greater than a standard flatness,

wherein when the measured flatness of the detected flat face meets at least the standard flatness, performance of the diagnosing device is determined to be sufficient and a determination is made that a calibration is unnecessary, and

wherein when the measured flatness of the detected flat face is below the standard flatness, performance of the diagnosing device is determined to be insufficient and a determination is made that a calibration is necessary,

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wherein said robot includes a ground-contact portion for contact with a floor face,
and

wherein an indicator indicates a place on said surface portion where said ground-contact portion of said robot is placed.

2. (Canceled)

3. (Previously Presented) A stereo camera diagnosing device according to claim 1, wherein said robot includes one or more mobile legs including a foot; and

wherein said indicator indicates a place on said surface portion where the soles of feet of said robot are placed.

4. (Original) A stereo camera diagnosing device according to claim 1, wherein said stereo camera diagnosing device has a folding structure, which becomes a flat shape exposing said surface portion at the time of unfolding said folding structure.

5. (Original) A stereo camera diagnosing device according to claim 1, wherein said surface portion includes texture within a template, which can correctly perform matching on an epipolar line in the event of a stereo camera system using template matching.

6. (Original) A stereo camera diagnosing device according to claim 1, wherein said surface portion includes texture which allows avoiding mismatching in diagnosis and calibration.

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7. (Original) A stereo camera diagnosing device according to claim 1, wherein
said surface portion has patterns shaded in uniform texture.

8. (Original) A stereo camera diagnosing device according to claim 1, wherein
said surface portion includes calibration patterns of which geometrical shape is known.

9 - 15. (Canceled)